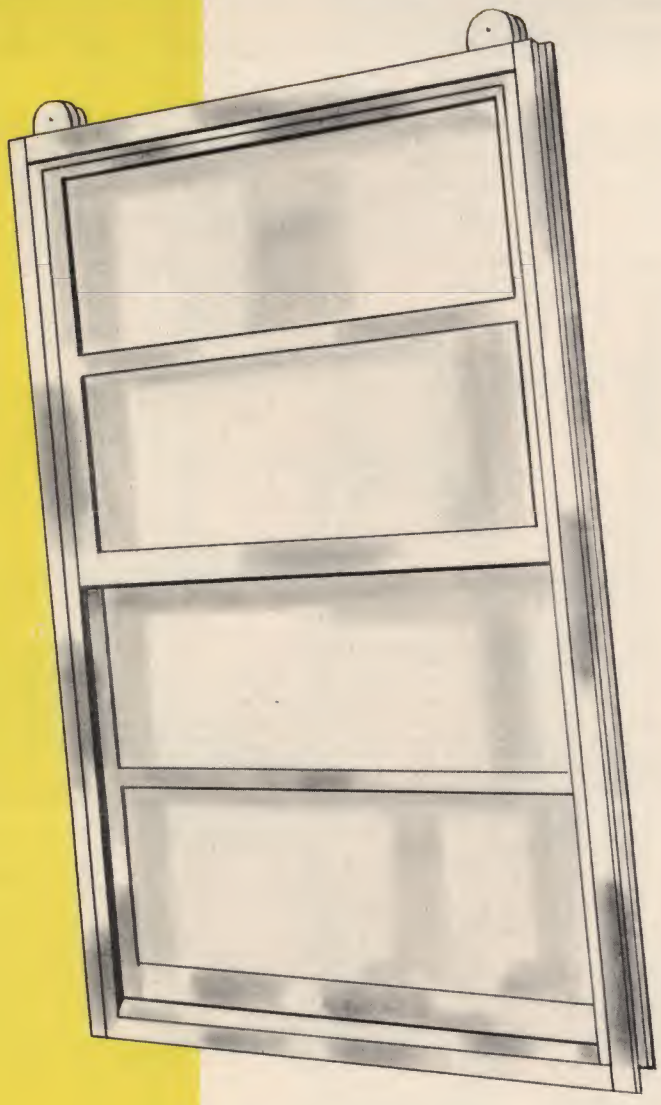
AIA File 16L

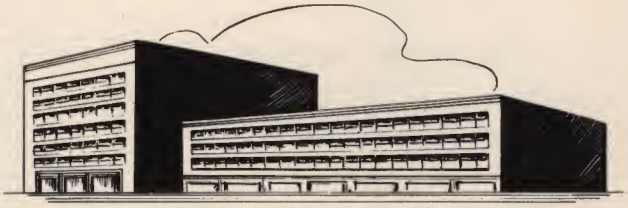
16a
Win

Windalume

aluminum double-hung windows

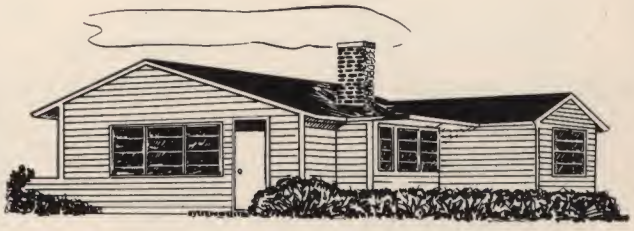


SERIES DH-A2
for COMMERCIAL and INSTITUTIONAL BUILDINGS



SCHOOLS
HOSPITALS
OFFICE BUILDINGS
FACTORIES

SERIES DH-A1
for RESIDENCES



HOMES
APARTMENTS
HOTELS

QUALITY APPROVED
DH-A1
A.W.M.A. Quality Specifications — Materials, Construction, Strength of sections and Air infiltration requirements — confirmed by PITTSBURGH TESTING LABORATORY
MEMBER — ALUMINUM WINDOW MANUFACTURERS ASSOCIATION

CATALOG NUMBER 40

WINDALUME CORPORATION
KENVIL, NEW JERSEY

Windalume

ALUMINUM DOUBLE-HUNG WINDOWS

The Windalume Series DH-A2 Aluminum Double Hung Windows are intended for use in commercial and institutional buildings. Each window is custom built by skilled craftsman and incorporates the ultimate in modern window design and construction.

The Windalume DH-A2 is a heavy window designed with extra strength to assure years of maintenance-free service under severe operating conditions. Typical of this greater weight is the thickness of the sill section which is .125". The Windalume sill is the heaviest now on use in DH-A2 commercial double hung windows. It provides an extra margin of safety and rigidity at the point of greatest abuse.

An important feature is the exclusive WEATHER BAR (shown at right) at all horizontal weathering points. This is the continuous extruded ridge that contacts the weatherstrip at head, meeting rail, and sill and provides *extra* pressure when the window is closed to guarantee true weather tightness.

IMPORTANT FEATURES

Double contact stainless steel weatherstrip at jambs insures weather tightness.

•

Unique design at horizontal weathering points permits alternate use of woven pile fabric or stainless steel to suit various conditions.

•

Glazing is done from inside with beads permitting use of 1/8" or 1/4" glass for 1/2" double glazing. Windows also available for outside putty glazing.

•

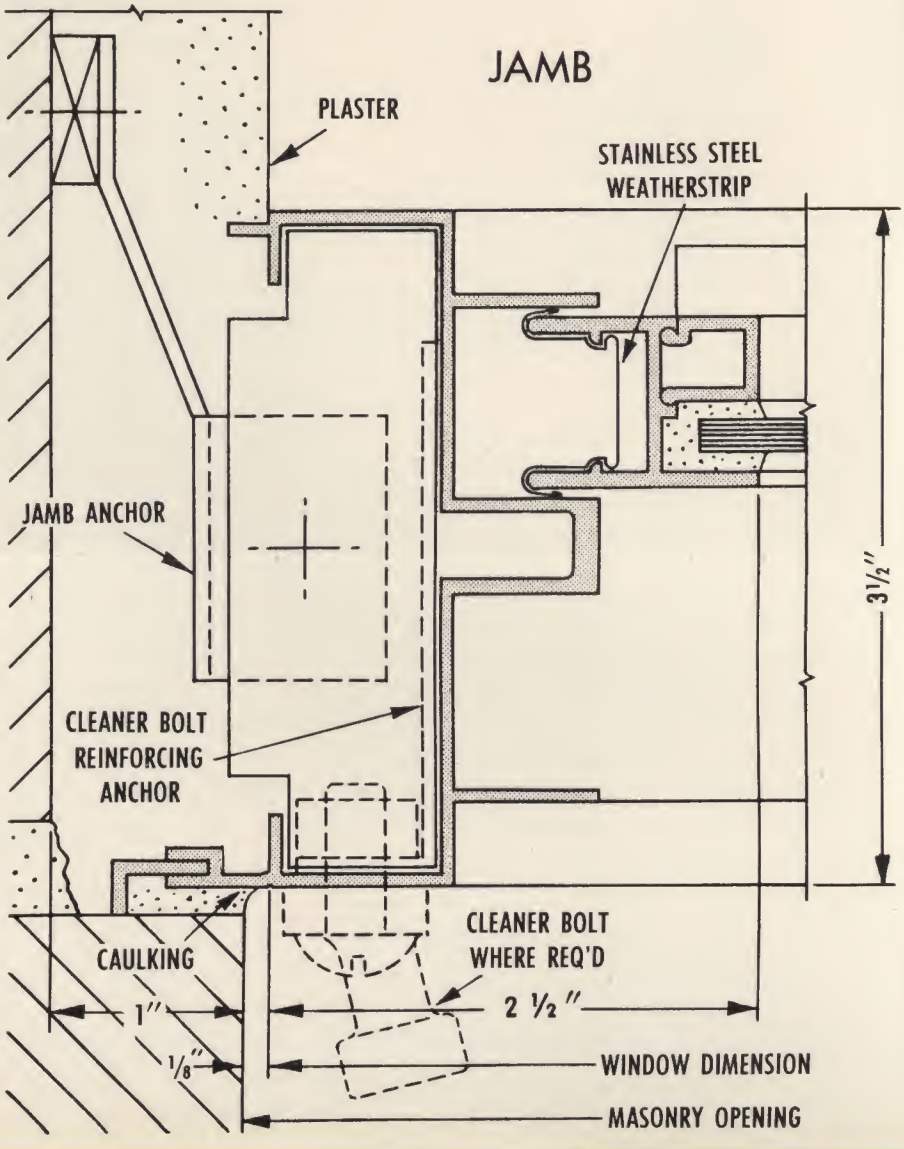
Overhead type balances are standard, but spiral balances are available for installation lacking overhead clearance.

•

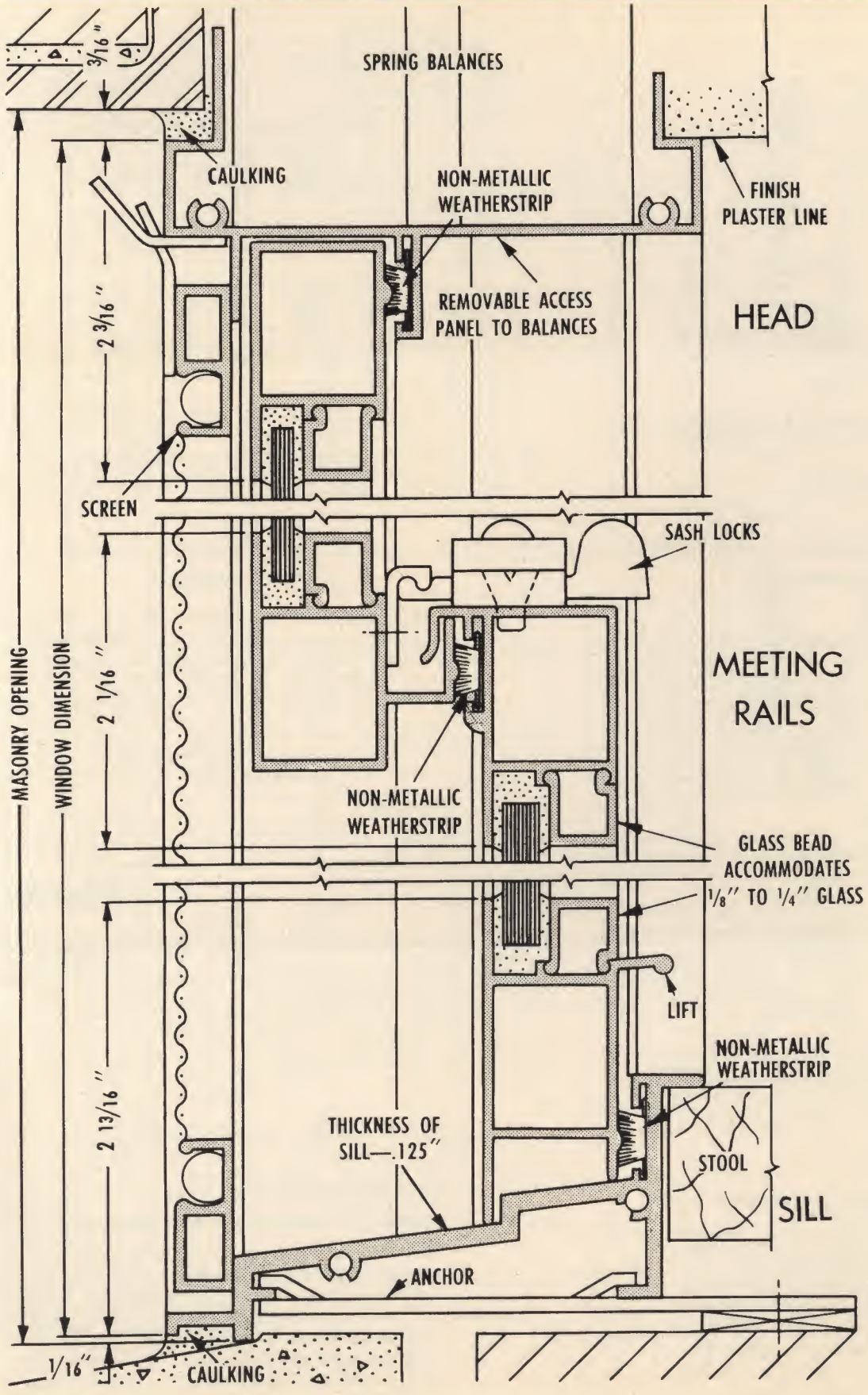
The Windalume DH-A2 series includes transom windows, hopper vents, and picture windows. Full and half screens as well as storm sash are available.

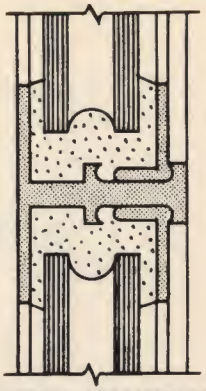
•

Windalume's Engineering Department will be pleased to cooperate in any way possible to help solve your window problems efficiently and economically.

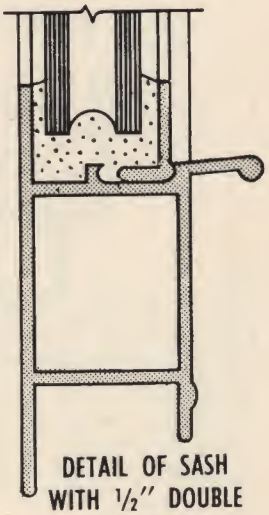


FULL SIZE DETAILS STANDARD DH-A2 WINDOW

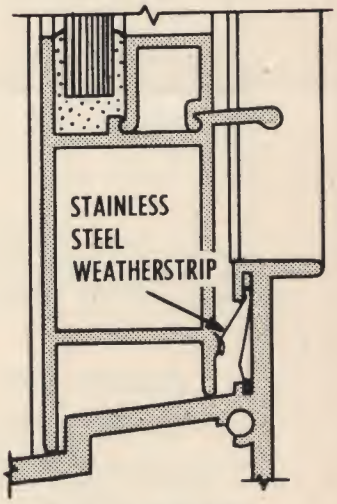




MUNTIN, ACCOMODATES 1/2" THERMOPANE AND 1/8" TO 1/4" GLASS

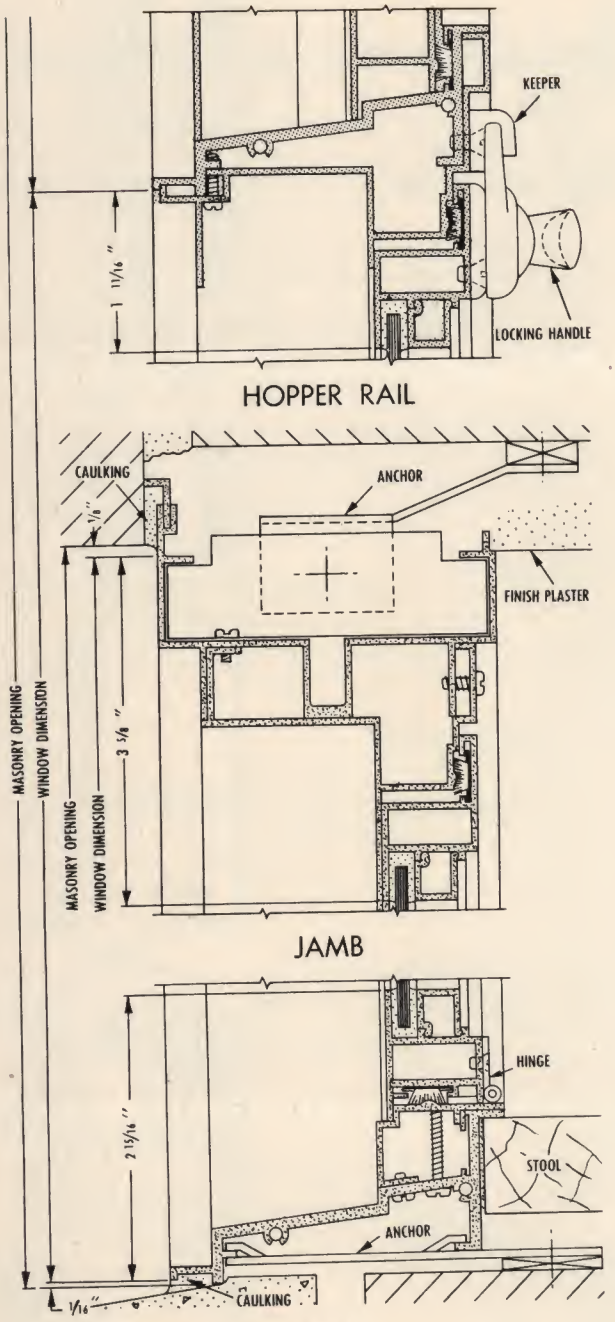


DETAIL OF SASH WITH 1/2" DOUBLE GLAZING



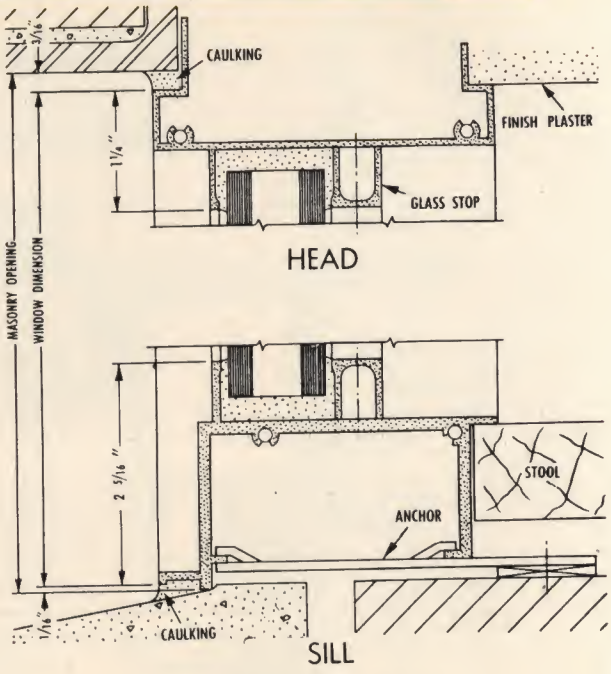
METAL WEATHERSTRIP AVAILABLE AS ALTERNATE IN HORIZONTAL RAILS

HOPPER VENT, PICTURE WINDOW, MULLION—HALF SIZE DETAILS



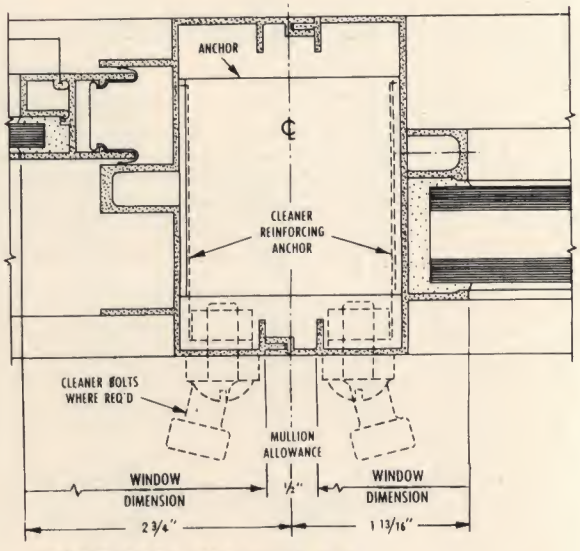
HOPPER VENT USED BELOW DOUBLE HUNG WINDOW

Hopper vents may be used below double hung windows to provide controlled ventilation. Note full weatherstripping around entire perimeter of hopper section. Tubular sash sections insure maximum rigidity. Double hung windows may be furnished with fixed transom lites above operating sash.



PICTURE WINDOW

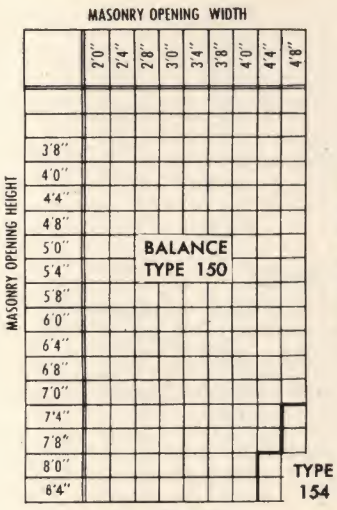
Fixed picture windows with or without muntins are available for use with double hung windows. They will accommodate 1/4" plate glass or double glazing, and are usually furnished for inside bead glazing.



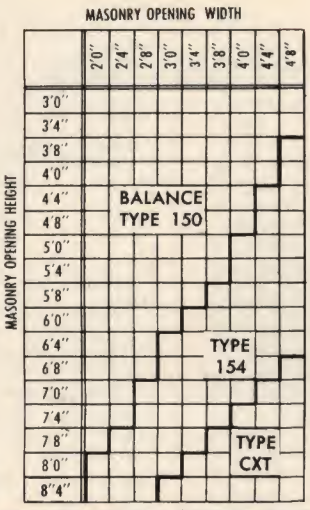
STANDARD MULLION OF PICTURE WINDOW WITH DOUBLE HUNG

Interlocking feature of jambs permit narrow sight lines by eliminating mullion plate when joining double hung windows with each other or with picture windows. For corners or bays, or such conditions as wall intersections or columns in wall, wide or other special shape mullion covers are also available.

BALANCE CLEARANCE DETAILS

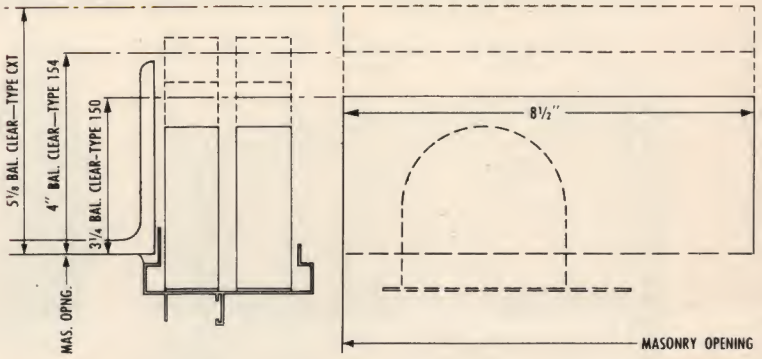


FOR 1/8" GLASS



FOR 1/4" GLASS OR 1/2" DOUBLE GLAZING

HEAD CLEARANCES FOR SASH BALANCES



ELEVATION SHOWING BALANCE POCKETS

SPECIFICATIONS Windalume series DH-A2 double hung windows

1—GENERAL—Aluminum double hung window manufactured by Windalume Corporation shall be furnished in all openings where shown on plans and called for in specifications.

2—WORK NOT INCLUDED—Glazing, caulking, and grouting, installing of screens, shades, shade brackets, and window cleaner anchors are not included in the window contract. If required they are specified under other sections of this contract.

3—MATERIALS—All aluminum used in frame and sash members shall be extruded and shall contain not less than 96.0% aluminum and not more than 0.4% copper. Minimum tensile strength shall be 17,000 pounds per square inch, yield strength not less than 10,000 pounds per square inch. All screws, rivets and bolts shall be aluminum or stainless steel.

4—FRAME CONSTRUCTION—Sections shall be in accordance with standard DH-A2 details, so designed that sash members are removable. Minimum thickness shall be .064" throughout except at sill which shall be not less than .125". Frames shall be of rigid construction joined with both a mechanical joint and welded. Sill joints are to be constructed so as to be permanently water tight. Head, jamb, and sill anchors shall be furnished of a type and in quantity necessary to assure satisfactory installation of frame. Anchors and reinforcements shall be of corrosion resistant material not harmful to aluminum.

5—SASH CONSTRUCTION—All sash members shall be of extruded aluminum not less than .064 inches thick. Joints shall be mechanical and or welded and shall be rigid and neatly fitted. Top rail, bottom rail and upper meeting rail shall have integral continuous contact ridge to assure high pressure weather seal. Muntins shall be interlocked at cross joints and securely fastened to sash members.

6—WEATHERSTRIPPING—Jamb weatherstrip shall be of double contact type made of resilient stainless steel.
Head, sill, and meeting rail weatherstrip shall be of woven pile fabric or resilient stainless steel as indicated.

7—HARDWARE—Continuous sash lift shall be extruded on bottom rail of lower sash. Each window shall be equipped with two sash locks one at either jamb, to hold window in closed position. Balance shall be overhead type, mounted in either head or jambs, and shall be adjustable. If required, spiral type jamb balances may be furnished. When meeting rails are less than six feet above finished floor, upper sash shall have one or two pull down handles on meeting rail depending on width. When meeting rails more than six feet above finished floor, upper sash shall have pull-down socket for pole operation.

8—FINISH—The exposed surfaces of all aluminum frames and sash shall be cleaned to make them reasonably uniform in color and free from scratches and other serious surface blemishes.

9—PROTECTIVE COATING—Before shipment from the factory, all windows shall be given a coating of clear water-white methacrylate type lacquer on all exposed surfaces. The lacquer shall withstand the action of lime morter for a period of at least one month in an atmosphere of 100% relative humitity at room temperature and shall be of a type to which glazing compound will adhere.

10—PERFORMANCE REQUIREMENTS—The windows shall meet the requirements of the Aluminum Window Manufacturers Association Specification DH-A2 published in Sweet's File, Architectural, latest edition, including horizontal and vertical deflection tests and air infiltration limits.

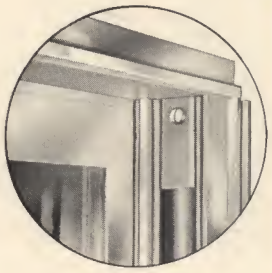
WINDALUME DH-A2 DOUBLE HUNG SHORT FORM SPECIFICATIONS

All double hung aluminum windows shall be Windalume series DH-A2 units or approved equal, (Indicate whether putty glazed or bead glazed.) These windows shall conform to the Aluminum Window Manufacturers Association specifications DH-A2 as published in the Sweet's File, Architectural, current edition. Horizontal weatherstrip shall be woven pile fabric or stainless steel (specify one).

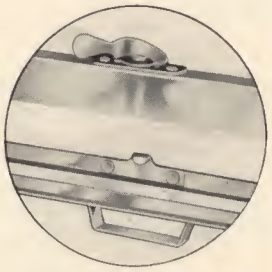
Windalume

SERIES **DH-A1**

ALUMINUM DOUBLE-HUNG WINDOWS

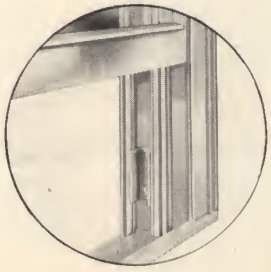


detail at head



stainless steel lock and aluminum pull

strong tubular sash "double sealed"



detail at sill Bottom sash raised

WINDALUME ALUMINUM WINDOWS combine the ultimate in engineering design with the finest corrosion-resistant materials to produce a life-time product of permanent beauty and use.

Adaptable to any design style or type of construction, Windalume windows are quickly and easily installed, and require no care or maintenance.

Double weatherstripping of stainless steel and extra heavy tubular construction assure maximum utility and enduring value.

advantages

extruded sections
Extra heavy extruded architectural aluminum alloy construction heat treated for strength and precision.

tubular sash section
Tubular construction maintains rigid, airtight closure and easy operation.

wide choice of muntin divisions
Wide range of division styles (see Page 7) in stock. Special designs also available.

low air infiltration
Heat loss and air leakage minimized by double contact members and weatherstripping.

double weatherstripped
Double stainless steel weatherstrip on the jamb. Thirty feet more than on ordinary windows.

double contact members
Two points of contact (see cut at left), assure weathertightness on sash perimeter. See detail— Page 8

protective lacquer finish
All surfaces coated with clear lacquer to protect them during erection from the action of mortar and plaster, and to enhance their appearance.

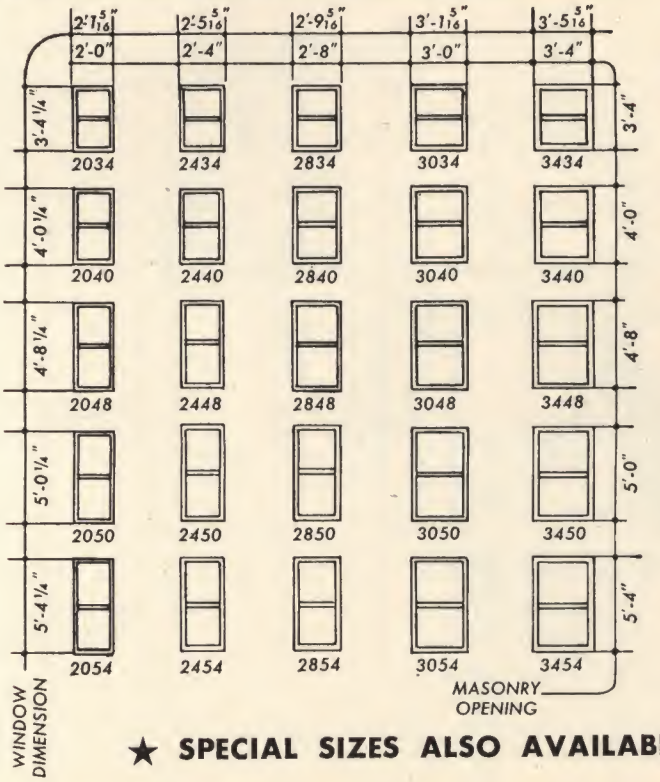
spiral balances
Nationally known, durable spiral balances (two to each sash) assure easy, well-balanced operation of sash at all times. They conserve space and are easy to adjust.

stainless steel sash lock
Safe and durable stainless steel locks secure WINDALUME windows.

continuous sash lift
Easy-to-grip lift bar is part of lower sash. Aluminum pull is attached to bottom of upper sash.

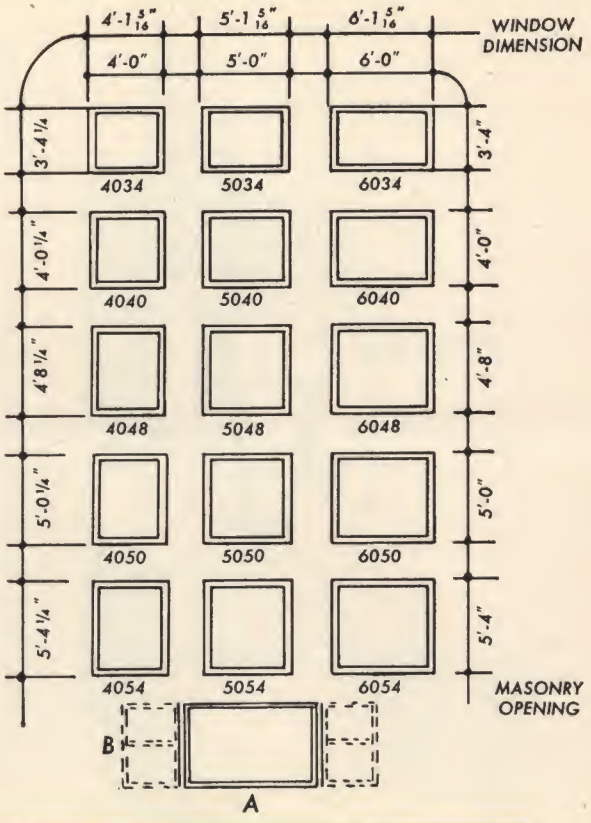
APPROVED by F.H.A. and New York Board of Standards and Appeals

★ STANDARD DOUBLE-HUNG WINDOWS



TYPES

STANDARD PICTURE WINDOWS



★ SPECIAL SIZES ALSO AVAILABLE

SPECIFICATIONS

The double-hung windows shall be those manufactured by Windalume Corporation of Kenvil, New Jersey. They are to be furnished completely fitted and assembled with weatherstripping and hardware, and ready for installation as hereinafter specified.

MATERIALS: Window frames and sash shall be manufactured of extruded aluminum alloy of not less than 17,000 lbs. per square inch tensile strength to the manufacturer's standard shapes. Thickness of material in all members shall be .062" minimum (#14 B & S Ga.) except the sill which shall be not less than .080" (#12 B & S Ga.). The design of the members shall conform to the strength requirements of the Aluminum Window Manufacturers Association.

CONSTRUCTION: Joints of frame and sash members are to be neatly fitted to a hairline and secured in a manner which will develop the full strength of the members connected and be absolutely weathertight. Muntin bars when required, shall be firmly secured at cross joints and to abutting sash members. Sash are to be designed for outside putty glazing. Glazing clips are to be furnished by the window manufacturer. Mullions are to be furnished as required.

HARDWARE: The window is to be equipped with 4 sash balances; bumpers as required for upper and lower sash; continuous lift on lower sash; aluminum pull down handle on meeting rail; a stainless steel lock, and anchors as required by construction. Lower sash shall be equipped with two stainless steel spring guides to center the sash and provide self adjusting floating action at all times.

WEATHERSTRIPPING: The window is to be equipped with stainless steel resilient weatherstripping on the jambs. It shall contact both the inside and outside of the sash and run the entire length of the jamb. Stainless steel weatherstripping is also to be provided at all horizontal members.

AIR INFILTRATION: The infiltration of air through the window shall not exceed ½ cubic foot per minute per linear foot of sash perimeter during a wind of 25 miles per hour velocity.

FINISH: The windows are to be finished in the natural aluminum color. A protective transparent coating shall be applied before shipment from the factory.

FULL LENGTH SCREENS: Screen frames are to be of tubular sections with the corners securely joined and reinforced, with horizontal rail in the frame at the meeting rails of the sash. Screen of 14 x 18 gauge aluminum alloy wire cloth, secured to the frame with an aluminum alloy spline. Each screen to have two top hangers to hang on hooks secured to the head of the window frame. Fingertip control turn latches are to be provided at each side of the screen at the bottom to engage the jambs of the window frame and secure the screen in a closed position. The screens are to be finished in the natural aluminum color.

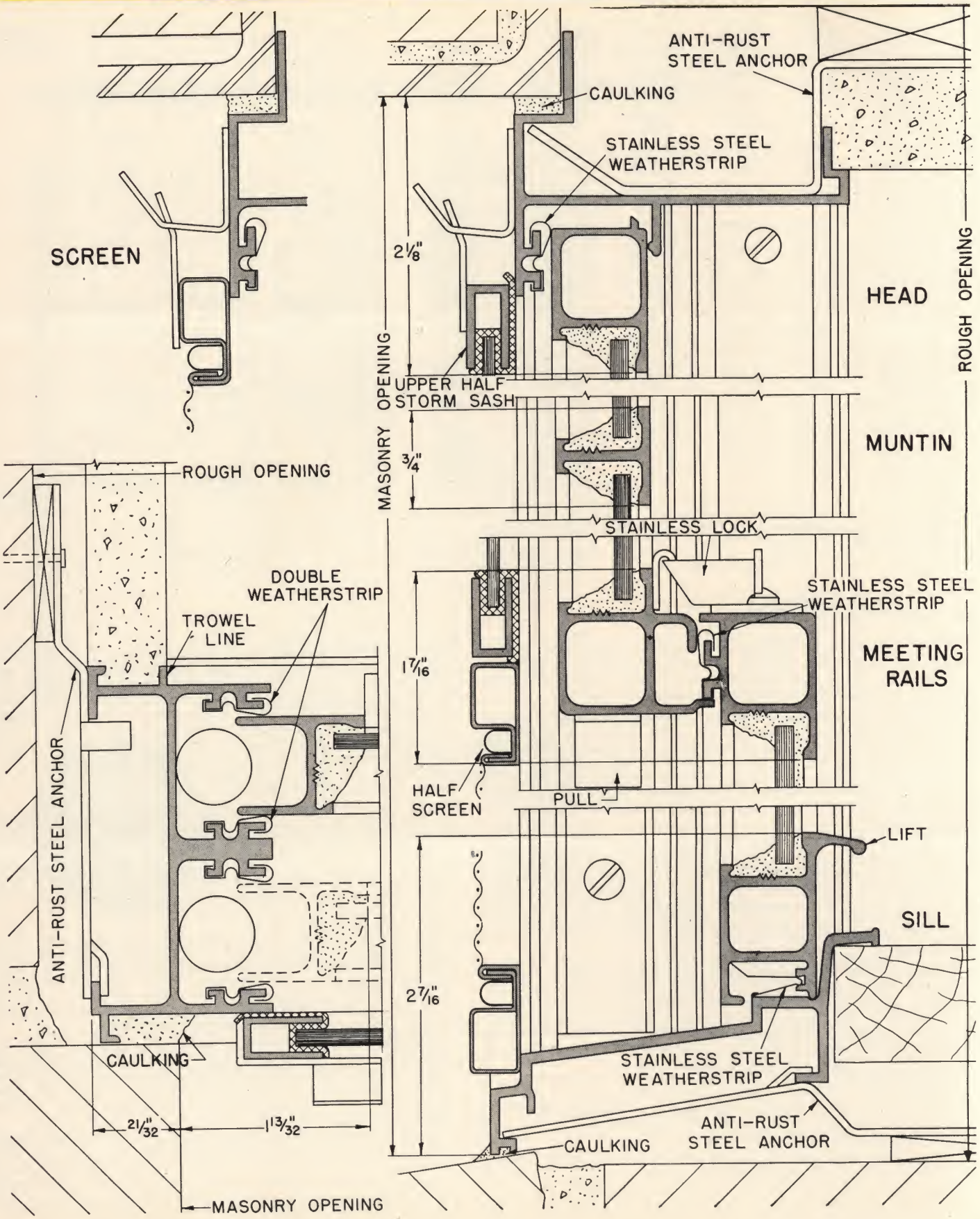
HALF LENGTH SCREENS: Screen frames to be of tubular sections with the corners securely joined and reinforced. The frame is to be fitted with 14 x 18 gauge aluminum alloy wire cloth, secured to the frame with alloy spline. When used independently screen to have two fixed clips on one side and two movable clips on the other side to permit the screen to slide freely up and down. When used with storm sash hanging hardware shall be provided. The screens to be finished in the natural aluminum color.

TWO PIECE STORM SASH: Storm sash shall be in two sections with extruded aluminum alloy frames with glass set in vinyl plastic channel. Non-metallic insulating material shall be applied to face of storm sash to prevent metal to metal contact with window frame. Ventilating stays shall be provided and finger tip control turn latches at each side of the bottom to engage the jambs of the window frame and secure sash in closed position.

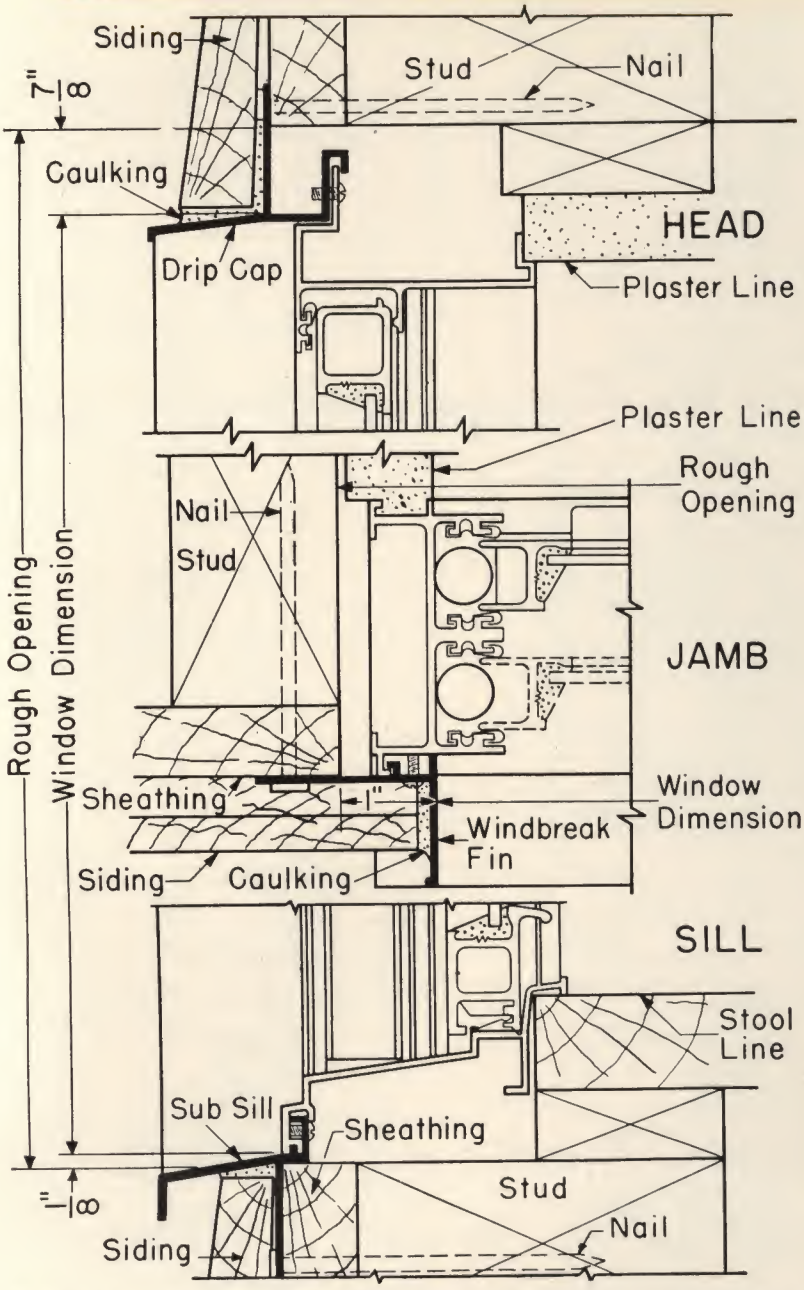
COMBINATION WINDOWS: Self-storing two-piece storm sash and half screen shall be provided for use on primary aluminum double hung windows. Inserts shall operate in extruded aluminum frame members securely attached to primary window. A spring push button shall be provided to permit various degrees of ventilation with lower sash.

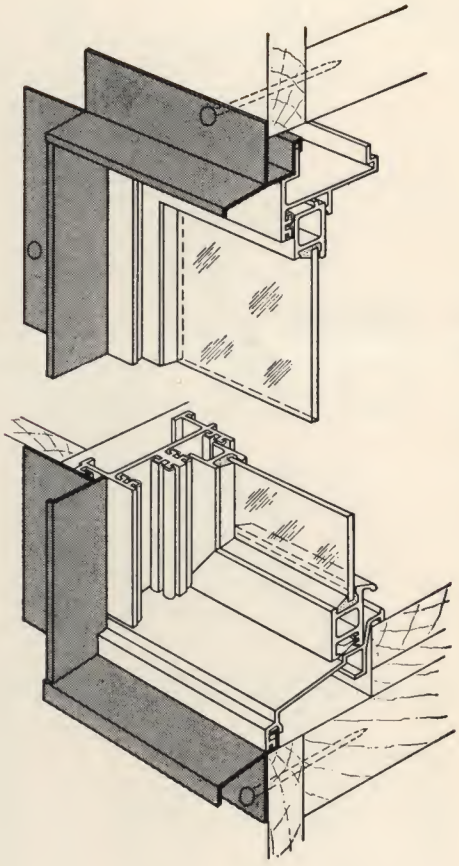
GLAZING: Windows are designed and balanced for double strength window glass. They will not accommodate ¼" plate or double glazing of the "Twindo" or "Thermopane" type. The glazing troughs should be cleaned of all dirt and grease before glazing and then back puttied. The glass should next be set in place and held by glazing clips supplied with windows. Finally, the face putty should be applied in the customary fashion. Only a glazing compound specifically designed for aluminum windows should be used.

FULL SIZE DETAILS STANDARD DH-A1 WINDOW



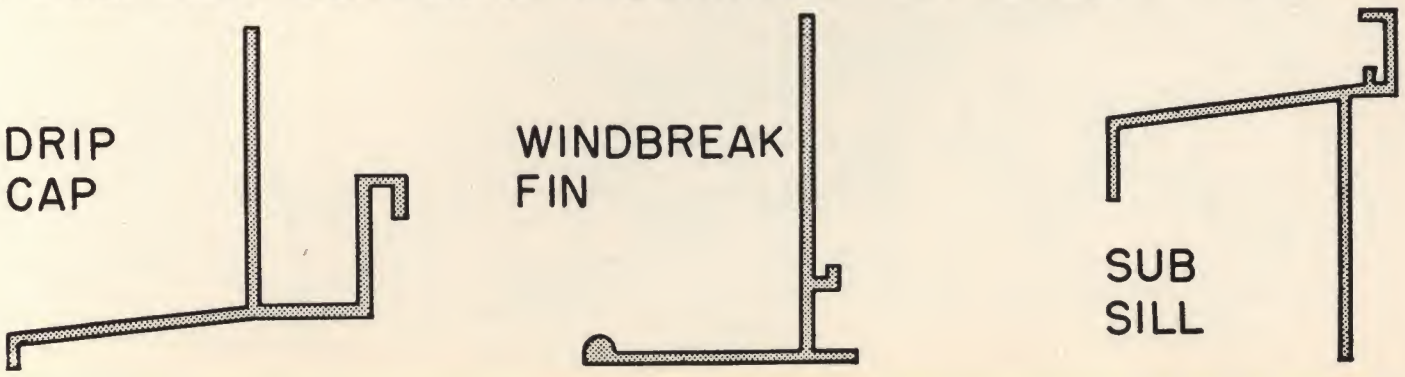
HALF SIZE DETAILS — FRAME WITH ALUMINUM EXTERIOR TRIM



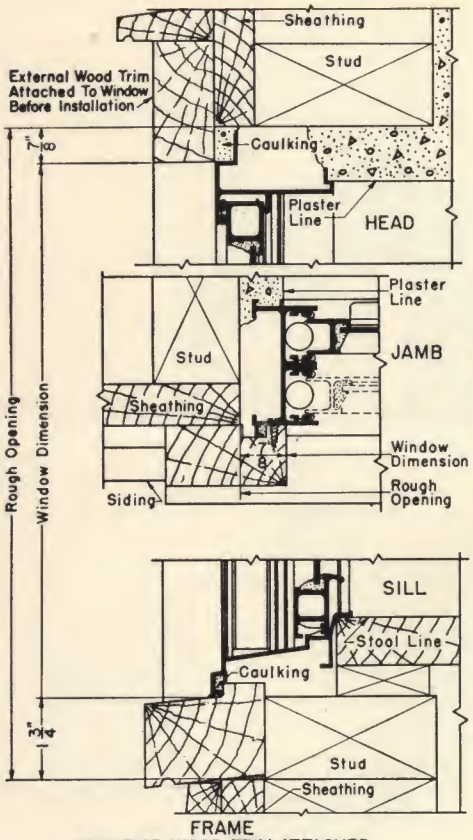


In order to simplify installation and cut costs, Windalume Aluminum Exterior Trim has been developed for use with standard Windalume Double-Hung windows. With the trim attached, it is possible to nail the window in place from outside in a few seconds. There is no need for special sills, wood trim or casing, or for any painting around the outside of the windows. Windalume Exterior Trim contains built-in flashing to insure weathertightness. It is ideal for frame or brick veneer construction.

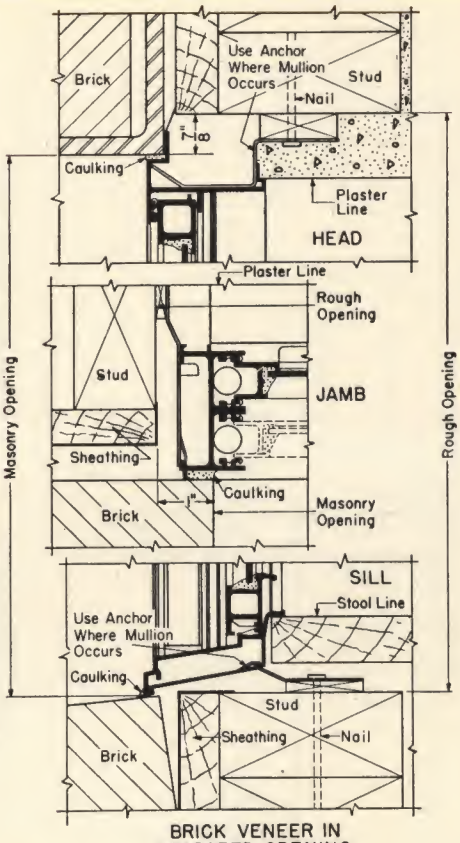
FULL SIZE DETAIL OF ALUMINUM EXTERIOR TRIM



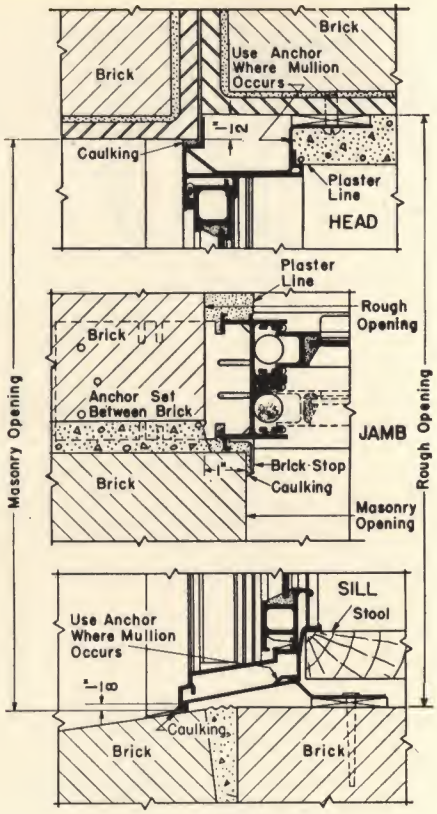
TYPICAL INSTALLATIONS



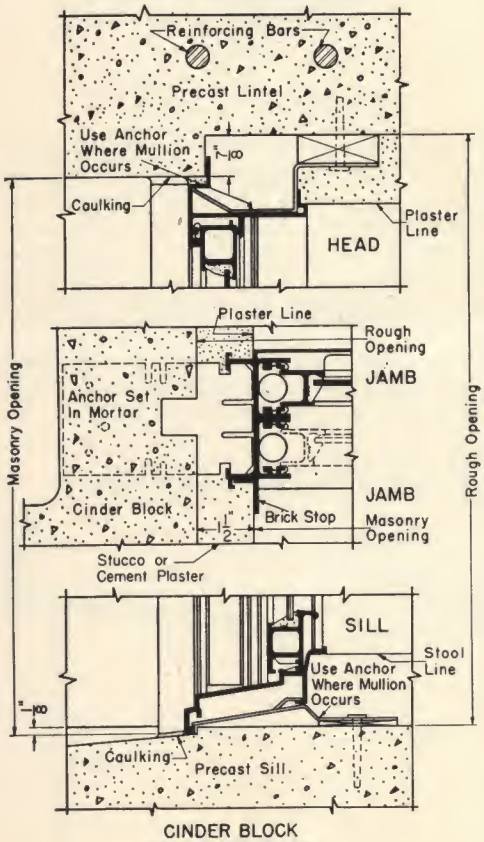
FRAME
EXTERIOR WOOD TRIM ATTACHED



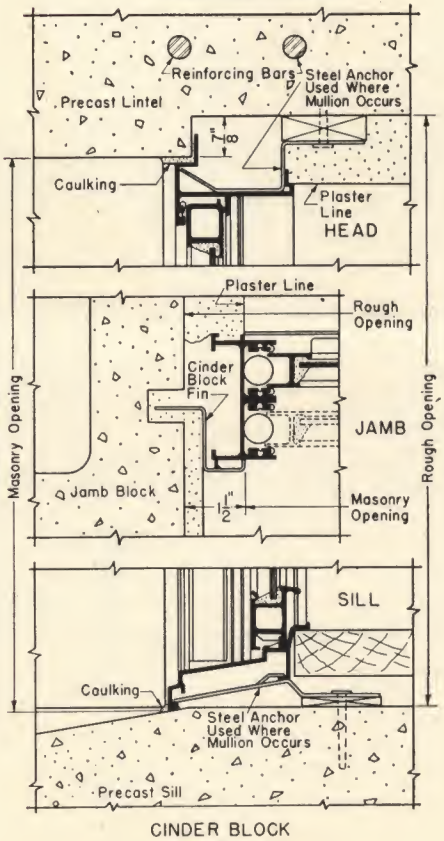
BRICK VENEER IN
PREPARED OPENING



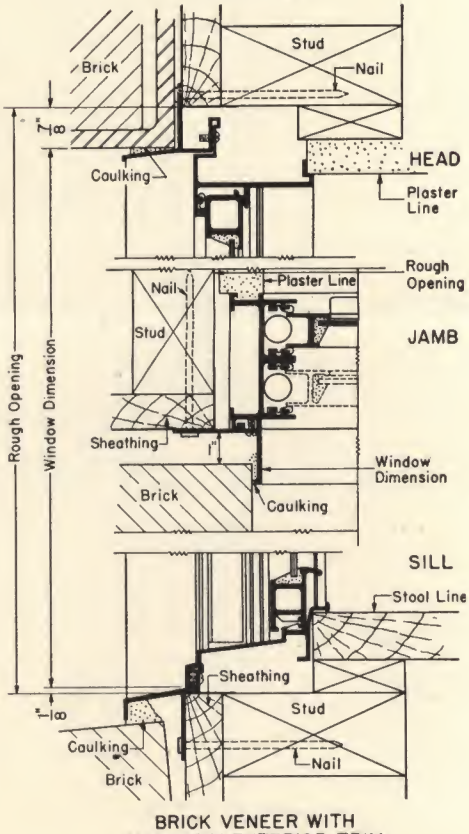
BRICK
BUILT IN



CINDER BLOCK
WITH BRICK STOP

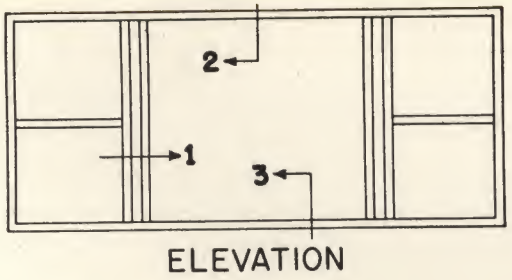


CINDER BLOCK
BUILT IN

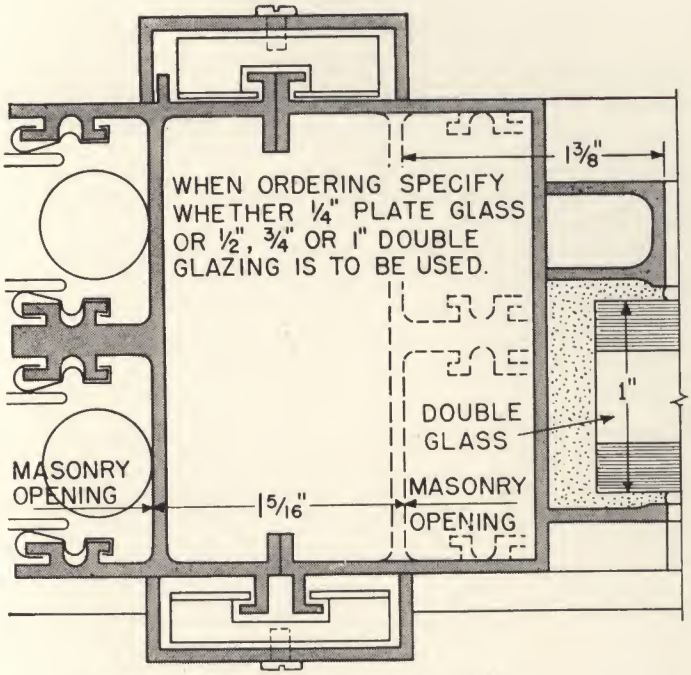


BRICK VENEER WITH
ALUMINUM EXTERIOR TRIM

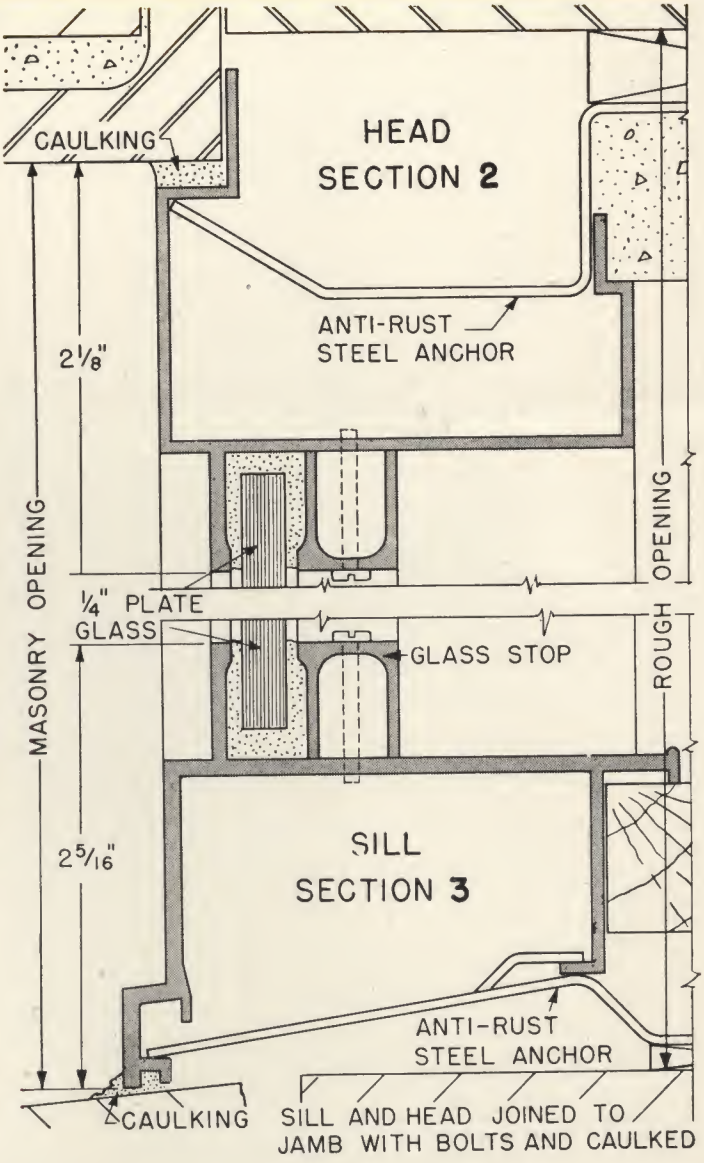
FULL SIZE DETAILS OF PICTURE WINDOWS AND MULLIONS

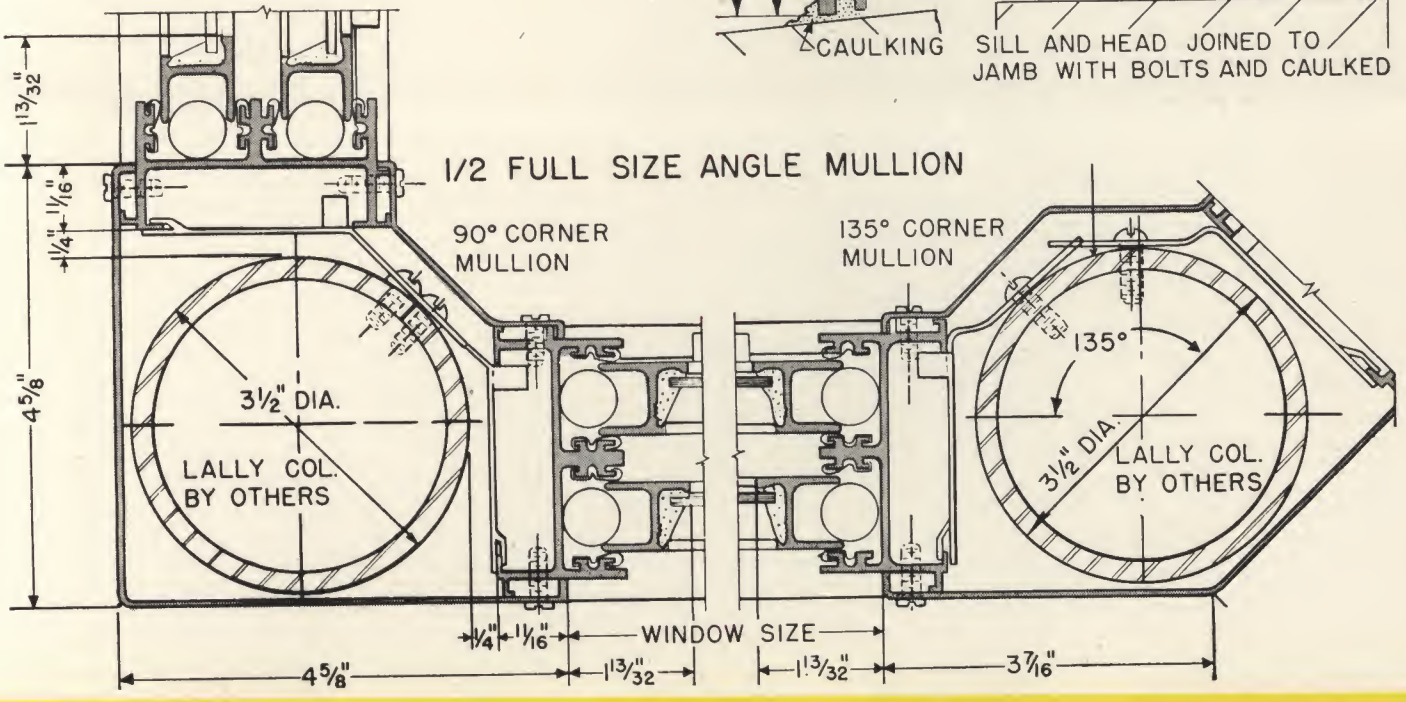


ELEVATION



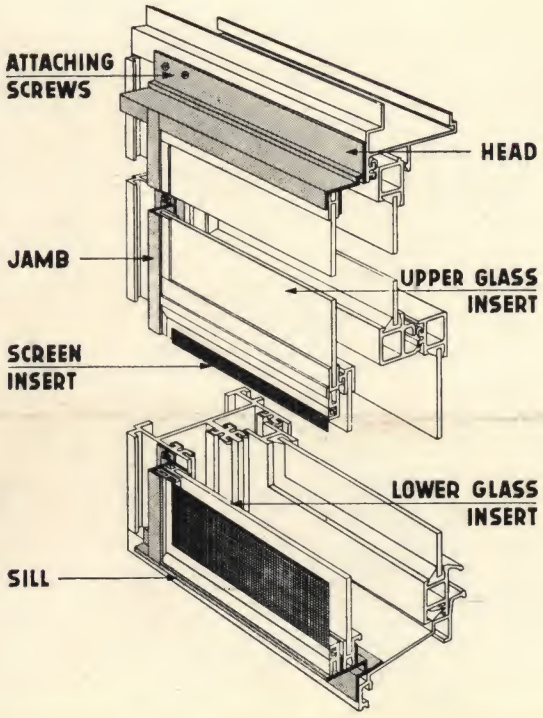
STANDARD 180° MULLION
SECTION 1





Windalume

ALUMINUM COMBINATION WINDOWS



The Windalume self-storing screen—storm sash combination has been developed for use with Windalume double hung windows.

Because it was specifically designed to fit the standard size double hung windows without the necessity of cutting or fitting, this unit can be readily installed by anyone without difficulty. The frame consists of four extruded members which are held in place with screws to the prime window. A special inter-locking corner insures a faultless installation, while a wide contact face area provides for the maximum weather tightness.

The standard arrangement of inserts is shown in the drawing. The screen stays in place beneath the upper glass panel, while the lower glass insert is free to be moved to any one of four lock points ranging from fully closed to fully open. A spring push button holds the lower insert rigidly in the desired position.

The glass inserts are framed in extruded aluminum. The glass itself is set in the aluminum frame by a shock-absorbing extruded vinyl plastic channel. Glass panels can be taken apart readily for reglazing in case of breakage.

Screen inserts have an extruded frame, 14 x 18 aluminum mesh, and a re-usable spline. For those that desire them, extra top screens are also available.

Windalume combination windows are made in all of the same standard sizes as the Windalume aluminum double hung windows.

A FEW WINDALUME INSTALLATIONS

Name	*Address*	*Architect*
The Variety Club's Boy's Ranch	Bedford, Texas	Jack Corgan, Dallas, Texas
HE-D-JE Apartments	516 W. Harding Road, Springfield, Ohio	Hoerner Planing Mill, Inc., Springfield, Ohio
St. Cecelia's Convent	Algona, Iowa	Smith & Voorhees, Des Moines, Iowa
Cozad Community Hospital	Cozad, Nebraska	Frank N. McNett & Co., Grand Island, Neb.
Lencshire House	Washington, D. C.	George T. Santmyers, Washington, D. C.
Claremont Community, Incorporated	Arlington, Va.	Allen F. Kamstra, Arlington, Va.
Mount Alvernia Seminary	Wappingers Falls, N. Y.	Vincent S. Todaro, Brooklyn, N. Y.
Rye Colony	Rye, New York	William P. Katz, Yonkers, N. Y.
New Castle Motor Court	New Castle, Del.	Wolf & Glucksman, Newark, N. J.
New England Village Apts.	Summit, N. J.	Isadore Naftali, Newark, N. J.
Grandview Apartments	Pitman, N. J.	Edwards & Green, Camden, N. J.
Rockledge Manor Garden Apts.	Yonkers, N. Y.	J. T. Sibley, Yonkers, N. Y.
Riverside Memorial Chapel	Brooklyn, N. Y.	Ralph Leff, New York, N. Y.
Hilton Village Methodist Church	Norfolk, Va.	Rudolph, Cooke & Van Leeuwen, Norfolk, Va.
Seashore State Park Development	Cape Henry, Va.	Mattern & Mattern, Roanoke, Va.
Duncan Electric Mfg. Co.	Lafayette, Indiana	The Austin Co., Chicago, Ill.
Powers Regulator Co.	Skokie, Indiana	Sessions Engineering Co., Chicago, Ill.
Whiteway Parking Garage	New York, New York	H. I. Feldman, New York, N. Y.
Hotel Abbey—Extension	New York, New York	Wm. I. Hohauser, New York, N. Y.
Rita Gardens	Elizabeth, N. J.	Edwin Gerber, Newark, N. J.
Children's Center, Boulevard Houses	Brooklyn, New York	Kelly & Gruzen, New York, N. Y.
Halifax Apartments	Daytona Beach, Florida	LeRoy Sheftall, Jacksonville, Fla.
Linn Cord Developments	Affton, Missouri	Arthur B. Rathert, St. Louis, Mo.
Norfolk Housing Project Va 6-5	Norfolk, Va.	Vernon A. Moore, Norfolk, Va.
Fairmont Foods Company	Omaha, Neb.	
Immaculate Conception Seminary	Darlington, N. J.	Kruger & Fava, Newark, N. J.
Psychiatric Institute	Baltimore, Md.	James R. Edmunds, Jr., Baltimore, Md.
St. Hedwigs Convent	Elizabeth, N. J.	George Vuinovich, Alpine, N. J.

WINDALUME CORPORATION

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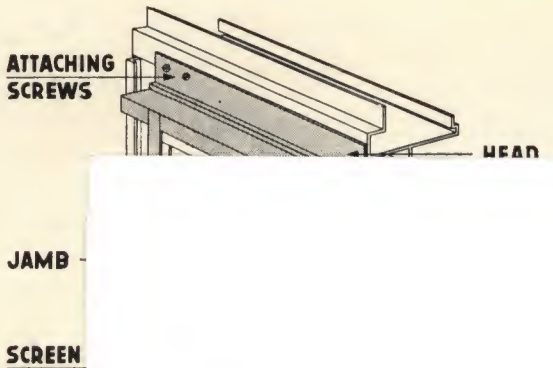
Windalume

ALUMINUM COMBINATION WINDOWS



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